

General Notes:

This report contains results for Metals analyses only. Due to the urgent need for the metals results, results for Glycol analysis will be included in Part 2 of 3 Report. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1202003-11, -12, -21 thru -23, and 1202003-48 thru -50 are not included in this report since these samples were designated for Volatile Organic analysis only.

For Work Order 1202003 - **This is Report 1 of 3.**

Two sample vials for the VOC analysis were received broken for 1202003-20. One sample vial for the Alcohol analysis was received broken for two samples, 1202003-01 and 1202003-20. Analysis was completed on the remaining vials. All samples were received at proper temperature.

Analytical results for samples by the Orthophosphorus method are not included in this report. Instead samples were analyzed using the Total Phosphate method to eliminate any issues with holding times. Since the Orthophosphorus method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Where applicable, sample results are qualified based on the highest level concentrations of field QC contamination found in the field, equipment, or trip blanks.

Unless otherwise noted below, all required instrument and method QC was run and was within criteria.

Metals Analysis Note:

Uranium, strontium, lithium, tin, and titanium were analyzed as an on-demand analysis.

Results for zinc for samples 1202003-36-38,-40-41,-43 were qualified estimated 'J' due to the laboratory quality control check sample results outside of criteria.

REPORT 1 of 3

General Notes:

This report contains results for Volatiles (VOAs), Semivolatiles (SVOAs), Glycol, and Alcohol analyses only. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1202003-06 thru -10, 1202003-24 thru -31, and 1202003-40 thru -47 are not included in this report since these samples were designated for Metals and Mercury analyses only.

For Work Order 1202003 - **This is Report 2 of 3.**

Chain-of-Custody forms are included in Report 1 of 3 for this Work Order.

Two sample vials for the VOC analysis were received broken for 1202003-20. One sample vial for the Alcohol analysis was received broken for two samples, 1202003-01 and 1202003-20. Analysis was completed on the remaining vials. All samples were received at proper temperature.

Analytical results for samples by the Orthophosphorus method are not included in this report. Instead samples were analyzed using the Total Phosphate method to eliminate any issues with holding times. Since the Orthophosphorus method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Where applicable, sample results are qualified based on the highest level concentrations of field QC contamination found in the field, equipment, or trip blanks.

Unless otherwise noted below, all required instrument and method QC was run and was within criteria.

Glycols by HPLC/MS/MS Note:

Samples were analyzed for diethylene glycol (DiG) (CAS# 111-46-6), triethylene glycol (TriG) (112-27-6), tetraethylene glycol (TeG) (112-60-7), 2-butoxyethanol (2-Bu) (111-76-2) and 2-methoxyethanol (109-86-4) by HPLC/MS/MS (inst id: TQD-LCMSMS) on a Waters Atlantis dC18 3um 2.1 x 150mm column (s/n- 0141301481).

An HPLC/MS/MS method does not currently exist for these analytes. ASTM D 7731-11 and EPA SW-846 Methods 8000C and 8321 were followed for method development and QA/QC limits where applicable. All applicable OASQA On Demand QA/QC protocols were followed.

The aqueous samples were injected without extraction onto the HPLC/MS/MS system

The blank spike results for two parameters were outside of quality control acceptance limits but there was no impact on the data.

Refer to notes in the case file for additional information regarding the analysis.

SVOAs Analysis Note:

All samples were extracted by EPA SW-846 Method 3520C followed by analysis using EPA SW-846 Method 8270D. Refer to notes in case file for additional information regarding the analysis.

For this project two additional compounds are added to the SVOC analysis; 2-methoxyethanol and 1-methylnaphthalene. A separate calibration curve is used for these compounds with quality control requirements per the On-Demand protocol. For 2-methoxyethanol, the analysis is also being completed on each sample using the HPLC/MS/MS technique (Glycol analysis). Since SVOC extraction efficiencies are problematic for 2-methoxyethanol, the results from the HPLC/MS/MS technique should be used for these samples. For samples 1202003-13 thru 39 the blank spike (LCS) and matrix spike quality control samples did not include these two compounds. Therefore, all quantitation limits for these samples are qualified estimated "UJ."

For samples 1202003-01 thru -05, quantitation limits and 2-methoxyethanol and 3,3'-dichlorobenzidine are elevated due to zero percent recovery in the low-spike quality control check (BS1). Results for the mid-level spike quality control check (BS2) are within acceptance limits; therefore, quantitation limits are raised to the mid-level value. For samples 1202003-01 thru -05 data for 3,3'-dichlorobenzidine is rejected and qualified "R" due to zero percent recovery in the low- and mid-spike

quality control check. For samples 1202003-01 thru -05, quantitation limits for 3-nitroaniline are qualified "UJ" due to low percent recovery in the low-spike quality control check. For samples 1202003-01 thru -05, quantitation limits for 4-chloroaniline are elevated due to very low percent recovery in the low-spike quality control check. In the report, only 16 compounds are reported for the blank spike quality control check samples. Quality control information about the additional compounds is available in the case file.

Appropriate volumes were not provided for a matrix spike and a matrix spike duplicate for the second sample set 1202003-13 thru 1202003-39.

Two surrogate recoveries were below acceptance limits for sample 1202003-36. Results are below the quantitation limit and are qualified as estimated "J" and may be biased low. Quantitation limits are qualified as estimated "UJ."

Results for a limited number of parameters found in all samples have been qualified "B" because of contamination found in either the method blank, field blank, or equipment blank.

Three blank spike results for 2,4-Dinitrotoluene are slightly above the high end of the acceptance window. There is no impact on the data.

VOA Analysis Note:

Acrylonitrile was analyzed on-demand using CLP equivalent methodology. This analyte does not appear in the data tables or the QC summary and all data for this compound is summarized here. Acrylonitrile was not detected in any of the samples above a quantitation limit of 2 ug/L. A four point curve was analyzed (2, 5, 10, and 20 ug/L). The samples were preserved to a pH<2 with HCl. A low level second source blank spike analyzed at a concentration of 2 ug/L had a recovery of 98%. A mid level second source blank spike analyzed at a concentration of 10 ug/L had a recovery of 119%. Matrix spike/matrix spike duplicate analysis was performed for sample 1202003-01 (Sta. HW45). Matrix spike recoveries for acrylonitrile were 100% and 113% at a spike level of 5 ug/L.

A mid level second source blank spike for target compounds was analyzed and five compounds were outside the criteria. These compounds were not detected in the samples and there is no impact to results.

The matrix spike analyses for target compounds had one recovery high, one low, and three measures of reproducibility (RPD) slightly outside criteria. The source sample was non-detect and there is no impact to data.

The B qualifier was applied to acetone and chloroform sample results due to the presence of these compounds in associated field blanks.

Significant levels of isobutane were found in all trip, equipment, and field blanks. Isobutane was not detected in the environmental samples. The source of the field blank contamination should be investigated and corrected.

2-Chloroethylvinyl ether is not included in the analysis. 2-chloroethylvinyl ether breaks down in acidified samples.

Alcohols Analysis Note:

All required instrument QC was run and was within the required criteria.

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General Notes:

This report contains results for Inorganic analyses only. All other parameters identified on the chain-of-custody form are included in separate reports. Lab Sample numbers 1202003-11, -12, -21 thru -23, and 1202003-48 thru -50 are not included in this report since these samples were designated for Volatile Organic analysis only.

For Work Order 1202003 - **This is Report 3 of 3.**

Chain-of-Custody forms are included in Report 1 of 3 for this Work Order.

Two sample vials for the VOC analysis were received broken for 1202003-20. One sample vial for the Alcohol analysis was received broken for two samples, 1202003-01 and 1202003-20. Analysis was completed on the remaining vials. All samples were received at proper temperature.

Analytical results for samples by the Orthophosphorus method are not included in this report. Instead samples were analyzed using the Total Phosphate method to eliminate any issues with holding times. Since the Orthophosphorus method was being used as a screening method to determine the need to analyze the sample by the Total Phosphate method, results for Total Phosphate are not impacted.

Samples designated for the analysis of Oil & Grease were received in sample containers inconsistent with the type needed for the routine extraction procedure. Therefore, all samples were extracted using the manual extraction technique.

Where applicable, sample results are qualified based on the highest level concentrations of field QC contamination found in the field, equipment, or trip blanks.

Unless otherwise noted below, all required instrument and method QC was run and was within criteria.

TDS Analysis Note:

As required for this project, sample results were qualified "B" when the TDS value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to the field blank (FB13) contamination.

TSS Analysis Note:

All required instrument QC was run and was within the required criteria.

Nitrite/Nitrate and Total Nitrogen Analysis Note:

Samples were run as an on-demand analysis.

Oil and Grease Analysis Note:

Samples were run as an on-demand analysis.

Samples were received in containers not conducive to use on the Horizon SPE-DEX automated system. Therefore, manual extraction technique was used for all samples. Refer to notes in the case file for additional information.

The quantitation limits for several samples were qualified estimated 'UJ' due to laboratory quality control checks outside of criteria limits.

Mercury Analysis Note:

All required instrument QC was run and was within the required criteria.

Total Phosphorus Analyses Note:

Samples were run as an on-demand analysis.

All required instrument QC was run and was within the required criteria.

As required for this project, sample results were qualified "B" when the TP value was less than 10X the value reported for contaminated blanks. All samples with detectable results were qualified "B" due to the field blank (EB02) contamination.

Anions Analysis Note:

All required instrument QC was run and was within the required criteria.

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